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ABSTRACT

Using National Employer Survey data collected during 1997 and 1998, this paper examines the one-year impact on employers of participating in school-to-work partnerships under the 1994 School-to-Work Opportunities Act. In both years the surveys asked about the kinds and numbers of school-to-work activities in which employers engaged, their participation patterns over time, actual provision of work-based learning slots for student, and the impact of partnerships on employers in terms of remedial education, recruitment costs, and youth turnover rates. Respondents were asked the same questions in 1998 as in 1997, which provided an opportunity to examine persistence, dropouts, and expansion. The study found that, overall, 30 percent of employers who had participated in school-to-work partnerships in 1997 had disengaged by 1998. Employers with the highest participation levels were most likely to increase the extent to which they offered workers remedial training, and those who participated consistently were most likely to provide work-based learning opportunities. Participation was attractive to employers concerned with the skill levels of their youth labor forces. Employers' affiliation with school-to-work partnerships related to decreased firing rates and quit rates for young employees. The National Employer Survey School-to-Work Follow-up Supplement Questionnaire is appended. (Contains 24 references.) (SM)

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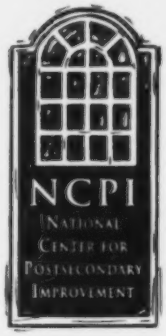

School-to-Work Partnerships and Employer Participation: Evidence on Persistence and Attrition from the National Employer Survey

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Abstract

Using data from the 1997 and 1998 administrations of the National Employer Survey, this paper examines the one-year impact on employers of participating in school-to-work partnerships resulting from the 1994 School-to-Work Opportunities Act. The author finds a high degree of volatility in employers' participation in such partnerships. However, employers that sustained ongoing participation were more likely than others to increase their provision of work-based learning opportunities. The analysis also uncovered some evidence of a "spillover" effect: even those employers without any formal affiliation with school-to-work partnerships seem to be increasing their provision of work-based learning opportunities.

Contrary to the expectations of some, the study finds that employers with the highest levels of participation in school-to-work partnerships were likely to increase the extent to which they provide their workers with remedial training. Those recently joining partnerships were actually likely to increase the percentage of their labor costs spent on recruiting new employees. Given that the School-to-Work Opportunities Act was passed only recently, it is premature to expect reductions in the need for remediation and investment in employee recruitment. Rather, participation in school-to-work seems to complement other strategies to invest in labor force skills—not serve as a substitution for them. On the one hand, participation seems to be attractive to employers already concerned with the skill levels of their youth labor force. On the other hand, participating with a school-to-work partnership also seems to raise employer consciousness concerning the issues of basic workplace skills and labor force recruitment. Finally, the study finds that an employer's affiliation with a school-to-work partnership is associated with a decreased firing rate for young employees as well as decreased quit rates. These shop-level effects represent the first places that the positive impact of a school-to-work partnership might be seen.

Introduction

Over the past two-and-half years, the work that the Institute for Research on Higher Education (IRHE) has conducted under the auspices of the National Center for Postsecondary Improvement (NCPI) and the Center for Policy Research in Education (CPRE) has addressed the fit between our nation's education and training systems and the needs of American employers for a skilled and competent workforce. In many ways, this endeavor represents a direct extension of IRHE's efforts from 1993 to 1997 as the National Center on the Educational Quality of the Workforce (EQW). That work utilized national survey data, case studies, and focus groups to document the disconnect between our nation's schools and places of work.

Much of the landscape that IRHE encountered as EQW still remains today; however, both cyclical economic changes and new policy initiatives have slightly altered the terrain. In 1994, an employer at an EQW focus group stated that, when hiring new front-line workers, his firm's preference was to pass over newly minted high school graduates in favor of a 26-year-old with three previous jobs, each with increased responsibility (Zemsky 1994). Today, in many industries, tight labor markets eliminate that option from an employer's decision set. The demand for available labor is higher now than at any time in the past 25 years—in fact, chances are that a 26-year-old with experience would not even apply for an entry-level front-line job.

Coincident with this new labor market development, the federal government implemented an initiative intended to serve as a catalyst for stronger links between schools and employers, as well as between education and the world of work. The School-to-Work Opportunities Act (STWOA) of 1994 promised to facilitate the transition from school to work by encouraging curricular reforms that bind academic and economic activity. A major requirement for the successful implementation of the STWOA was significant involvement on the part of private employers. The vision was not simply that employers would be engaged intellectually in the process of education reform—rather, the call was made for the nation's businesses to open up their shop floors and offices to students, who could experience what has come to be called work-based learning.

The links between work and learning have a long history in the United States. Well before the passage of the 1994 School-to-Work Opportunities Act, questions about the nature of our system for bringing students into the world of work challenged policymakers, educators, and theorists to consider its efficacy. Should the role of the Federal government be more or less directive? What latitude should state governments and other local authorities have? Given that research studying the impact of early job instability on an employee's long-term prospects is equivocal, should any attempt be made to rationalize the chaotic labor market experiences that typify a young person's transition into an adult career

(Neumark 1997)? These questions have even attracted international attention. Indeed, the Organisation for Economic Co-operation and Development (OECD) recently sponsored a comparative study of the initial transition from education to working life in 14 member countries, including the United States (Zemsky et al. 1998).

Regardless of the answers they believe best address these questions, analysts have reached a common conclusion: a vital school-to-work system depends on three key social actors—schools, students, and employers. Other researchers have examined the issue from the perspective of schools and students (Stern et al. 1995). Few, however, have been successful in assessing the employer's role on a national scale. Given the fact that employer participation is crucial for a full-scale work-based learning initiative, the research presented in this paper helps to fill that gap, investigating the extent to which employers are participating in activities supportive of STWOA goals, as well as determining the short-term impact of this participation.

Making use of national survey data collected during the summers of 1997 and 1998, the analysis finds that there is indeed a broad—and, to some extent, deep—commitment on the part of private employers to forging strong links between their businesses and local schools. Drawing upon data gathered as part of the National Employer Survey, this study was able to look at the short-term (one-year) effects of participation in a school-to-work partnership on employers' recruitment costs, participation in work-based learning activities, youth turnover rates, and provision of remedial training. What remains to be seen is whether this commitment will be fleeting—dissipating with future economic cycles and the vicissitudes of federal and state funding.

Study Background: Linking the Worlds of Work and Education

Questioning the relevance of our academic institutions in addressing the day-to-day issues Americans confront is not new. Nor are efforts to integrate the honing of the intellect with the delivery of instruction in practical matters. Throughout our nation's history, a tension has existed between the forces encouraging the separation of practical training from critical thinking and those encouraging their combination. Benjamin Franklin envisioned merging knowledge of the arts with the skills necessary to make one's way in the world. During the early part of the twentieth century, American philosopher and educator John Dewey sought to overcome the commonly held assertion that a liberal education was antithetical to a vocational one.

Divided Paths: Views of Educational Purpose

In any event, the American educational system has emerged as a decidedly two-track system. One track is dedicated to educating intellectuals and professionals and the other to training skilled workers. The former track—the academic—has come to be synonymous with our notions of education, especially "higher" education, and is dedicated to the life of the mind. It culminates in a postsecondary experience that leads to the granting of an academic degree. The latter track, the vocational, has been geared toward preparing students for the problems of everyday life and training them for the world of work. The vocational track has been characterized by the receipt of a high school diploma and, at times, some subsequent exposure to postsecondary education, which might lead to certification but rarely culminates in an academic degree.

In a somewhat ironic twist, the academic track—which is devoted to more abstract pursuits—has now become the key to practical, especially economic, success. As our manufacturing-based economy has given way to a knowledge-based one, those without an academic credential beyond a high school diploma have suffer a real economic setback. This fact is revealed by comparing the earnings of workers who have a high school diploma as their highest education credential with the incomes of their more highly educated peers.

In 1974, a male wage-earner with only a high school diploma earned 62 percent of the income of a worker with at least a baccalaureate degree. By 1997, that ratio had fallen to less than half (47 percent). Similarly, that 1974 male worker with just a high school diploma did not earn substantially less than someone with some college exposure but not a baccalaureate degree—the ratio was 98 percent. A 1991 change in how the Census Bureau collected data on educational attainment prevents a direct comparison of current rates with this 98 percent figure. However, we do know that in 1997 a male with just a high school diploma earned 91 percent of a worker who had some college education but not a postsecondary degree. At the same time, that high school graduate earned only 78 percent of the wages of a male with an associate's, but not a bachelor's, degree. Clearly, the attainment of an academic credential, whether two- or four-year, now bestows a huge advantage in terms of potential income.[1]

However, a large number of high school graduates do not obtain such a credential and its corresponding economic advantage. The vast majority of Americans—though by no means all—do obtain at least a high school diploma: as of March 1998, 88 percent of 25- to 29-year-olds had graduated from high school. Slightly more than half of this age cohort (58 percent) had taken college courses, while only slightly more than one-third (36 percent) had earned an associate's degree or better (U.S. Census Bureau 1998). Approximately two-thirds of the nation's young people do not attain the academic credentials that have become essential for economic well-being.

Reuniting Academic and Vocational: The School-to-Work Opportunities Act

The debate over linking or severing ties between academic and vocational education was revived in the early 1990s, as international economic competition intensified and as the performance of American students continued to lag behind that of students in other developed nations. Intended to make the prospects of those youths who do not pursue a postsecondary degree more viable, as well as to bolster the work-related skills of those who follow the academic path, in 1994 Congress enacted the School-to-Work Opportunities Act. Administered by the U.S. Departments of Education and Labor, the Act grants states seed money to design and implement their own comprehensive school-to-work (STW) systems. States and their localities are given broad latitude in designing their own systems, as long as each program includes the Act's three fundamental components: work-based learning, school-based learning, and connecting activities.

The Act goes beyond the integration of academic and vocational education. As defined in the legislation, STW systems also link secondary and postsecondary education, provide learning opportunities at the work site, and fully involve the private sector:

> School-to-work prepares students for college and careers and motivates them to learn by demonstrating the relevance of what they study and giving them a sense of available career choices. In fact, the School-to-Work Opportunities Act is a cornerstone of an ambitious national initiative to encourage states and local communities to change how they educate students. It puts community partnerships at the helm of a strategy for systemic education reform that offers students the opportunity to learn the way experts say they learn best—through application of rigorous academics. School-to-work improves learning and offers communities a means for preparing and educating the nation's workforce for the next century. Because it recognizes that businesses need well-educated employees, employers are key partners (Riley and Herman 1997).

However, developing a full-scale education system grounded on the principle of work-based learning requires substantial commitment on the part of private employers. Various commentators, whether or not they are proponents of work-based learning, point out this significant caveat. For example, according to James Hoerner and James Wehrley,

> industry support and participation are critical for all work experiences and obviously mandatory for site-based work experiences. Presently, industry is not willing or able to participate to any great extent in site-based work experiences. This implies . . . philosophical systemic

> changes are not only needed by educators, but also industry leaders if site-based work experiences are to become significant (Hoerner and Wehrley 1995).

Thomas Bailey, in the essay he prepared for The Brookings Institution on employer involvement, writes:

> If an expanded system of work-based education for secondary and postsecondary school students is to go beyond the type of part-time work millions of teenagers already experience, it needs to do more than simply place young people in any job that can be found. Employers must have some commitment to the broader goals of the public education system (Bailey 1995).

Evidence on Employer Participation in School-to-Work Partnerships

What do we know about employers' propensity to participate in work-based learning activities? In a major evaluation of the 1994 School-to-Work Opportunities Act, Marsha Silverberg and her colleagues at Mathematica Policy Research Inc. offer an initial answer. Their work was based on surveys of local school-to-work partnerships, in-depth case studies of selected states and local partnerships, and surveys of twelfth-grade students in those states. The authors found that the work-based learning activities most likely to be provided under the school-to-work rubric were of limited depth. In their July 1998 report, they state:

> Workplace activities are usually low-intensity; links to school-based learning could be strengthened. Arranging student workplace opportunities has been a major focus of partnership efforts. About 58 percent of partnership schools provide some workplace activity to students. To date, short-term exploratory experiences have been more common than longer-term work experience or training connected to school curriculum through career majors. For example, community service, worksite visits, and job shadowing are available in 29 to 49 percent of all partnership schools. In contrast, 19 to 29 percent of schools reported they offered more intensive paid work experience during the school year or the summer that they described as "linked to a career major." However, relatively few of the 1996 seniors surveyed in the eight in depth study states perceived having such school-linked workplace experiences. Just 16 percent said they had had a workplace experience where their performance was counted towards a school grade, and that was drawn on in classroom assignments (Silverberg et al. 1998).

Primary among obstacles to employer participation are financial constraints. A firm's participation in apprenticeships, for example, requires a substantial financial commitment. Consider the case of Project ProTech in Boston, which has successfully placed high school students in part-time jobs in Boston-area hospitals. One hospital, which employs 28 students, spends $8,892 per student—and 64 percent of this amount ($5,678) comprises expenditures over and above the student's wages (Osterman 1995).

Several factors are included in these nonwage expenditures. Employers incur costs by providing staff time for supervision and structured training—so that even work-based learning activities for which students receive no compensation can still carry substantial costs. This problem is not unique to the American situation. In Germany, known for its dual system of apprenticeship, approximately 85 percent of young people in general schooling enter vocational training (Hoerner and Wherley 1995). There, larger companies are finding the expense of apprenticeship training difficult to support. As Dietmar Harhoff and Thomas Kane indicate, German employers endured a loss of $9,381 (in 1990 dollars) per student trainee (Osterman 1995).

In the U.S., many companies surveyed by the Youth Entitlement Demonstration program in the 1970s believed that students could not contribute enough to justify the effort needed to supervise them (Bailey 1995). The United States faces an even greater hurdle to extensive employer participation, since many companies do not offer systematic training even for their regular employees. These companies would find it very difficult to meet the stipulations of the work-based learning component of the STWOA. Among others, requirements include mentoring and job training which, coordinated with the school curriculum, provide instruction in specific skills as well as in various aspects of the industry as a whole (Stern 1995).

Various institutional and legal arrangements also create obstacles to employer participation in work-based learning. It is often difficult to coordinate school schedules with work schedules. Concern with the reaction of labor unions to the prospect of student labor threatening full-time employment, as well as the applicability of child labor laws, may also dampen employer enthusiasm (Stern et al. 1995).

Even those employers who are initially willing to make an investment in training a young student may be dissuaded by the likelihood that the trainee could take his or her new-found talents elsewhere. This potential represents a special case of the more general problem of determining who assumes the cost of workplace training—whether the trainees are students or full-time, permanent workers. The more that training focuses on general skills, rather than skills specific to an industry or even a company, the less likely employers are to assume the costs. Since the skills imparted to students, as envisioned by the STWOA, are fairly general, there is little incentive for any individual employer to incur the associated costs.

Cyclical economic factors may also become an obstacle to employer participation. The National Center on the Educational Quality of the Workforce (EQW) found that, during periods of low labor demand, employers were reluctant to hire young workers. At such times—and particularly in the late 1980s—smaller firms had access to older, trained workers, eliminating the need to hire and train high school students. At the same time, larger firms were more concerned with making their organizations more streamlined and thus more competitive (Zemsky 1994).

Developing incentives that encourage employers to participate in work-based learning programs is a key issue if this initiative is to be instituted on a national scale. Bailey, Hughes, and Barr (1998), following earlier work by Bailey, offer three motivations that may affect employers' decisions to participate in work-based learning activities: philanthropic, individual, and collective.

Philanthropic motivations cannot be discounted out of hand. In one study of 15 school-to-work pilot programs, employers cited their desire to improve their communities as one of the most significant reasons for participation (Bailey, Hughes, and Barr 1998). Still, while some employers may participate in work-based learning for purely philanthropic reasons, it is not conceivable that such a motivation provides a sufficient basis for bringing a curriculum focused on work-based learning to scale.

A more compelling motivational basis for participation involves employers' individual interests. Employers may find that they enjoy positive public relations as a result of their participation in work-based learning activities. Furthermore, these companies may recognize high school students as a cheap source of labor, particularly when needed only on a short-term basis. For example, in a study conducted by the Institute on Education and the Economy (IEE), the most common impetus for a company's involvement in school-to-work programs was its need for low-cost, short-term labor (Hughes 1996). The IEE study found that companies view student labor as being less expensive than hiring adults on a temporary basis, because student interns work for free or for a low hourly wage and receive no benefits.

Another advantage to employing students is that this practice may help companies more easily meet their recruitment goals. Nearly 50 percent of the companies surveyed by Lynn and Wills (1994) had hired students as regular employees upon completion of their school-to-work programs. Similarly, the Office of Technology Assessment found that nearly two-thirds of surveyed employers considered recruitment goals to be the most important reason for their involvement in work-based learning programs (Hughes 1996). By employing students, then, companies are potentially making an investment in their enterprises and, at the same time, reducing recruitment expenditures.

Some states have attempted to enhance employers' individual motivations through the use of financial incentives for participation in school-to-work programs. From the passage of the STWOA in 1994 to 1996, the Federal government granted $643 million to 29 states, some of whom (including Michigan, Oregon, and Wisconsin) used a portion of these dollars to offer incentives in the form of tax credits or wage subsidies for companies that hire youth apprentices (Hershey et al. 1997).

Bailey cites collective motivation as a third incentive for corporations to participate in school-to-work programs. This notion refers to the collective interests of employers in facilitating the creation of a work force with a particular set of skills. The underlying concept here is that, by working together and participating in programs such as school-to-work projects, corporations will provide themselves with a skilled labor force. The logic follows: when more companies participate, a greater number of workers are reached, so the overall pool of applicants from which to choose is improved. A 1991 Louis Harris poll found that, of corporations familiar with youth apprenticeship programs, 48 percent believed that their company's involvement could help in producing a skilled labor force (Osterman 1995). Public relations can also form another facet of collective motivation. Katherine Hughes, a senior researcher at IEE, relates the story of an employer in the construction industry who feels his participation in the school-to-work program enables his company to undermine negative stereotypes associated with his industry (Hughes 1996).

In general, collective motivation refers to the fact that many employers participate in work-based learning activities not for the direct or immediate benefits associated with individual motivation, but for indirect and long-term benefits. This behavior originates in employers' beliefs that "broad implementation of work-based programs would strengthen the labor supply for all the industry's employers" (Hughes 1996). To the extent that an employer acts on the belief that participation in work-based learning activities will eventually improve the quality of a potential labor force, one could argue that collective motivation is really a variation of individual motivation, albeit deferred.

As opposed to pleas to philanthropic ideals, incentives that speak to individual and/or collective interests may be key to instituting work-based learning in a meaningful and large-scale manner. Without an appropriate data source, however, our understanding of the factors motivating—and inhibiting—employer participation in work-based learning activities remains necessarily speculative.

The Puzzle's Missing Piece: The National Employer Surveys

Much of our current knowledge about school-to-work partnerships or work-based learning activities is drawn from case studies of pilot programs (for example, Olson 1997). To the extent that nationally representative data has been used to understand these phenomena, the perspective has generally been that of the student. The reason for this singular perspective is that the major sources of data that shed light on these issues—the National Longitudinal Survey of 1972, High School and Beyond, and the National Longitudinal Survey of Youth—are all samples of students or youth cohorts. These student-focused data sets provide information on student backgrounds, school experience, exposure to vocational education, and labor-market outcomes. An overview of the results of this literature is presented in Stern et al. (1995). However, little can be gleaned from these data sets concerning the perspectives and motivations of employers who work with students.

Until now, no nationally representative data set existed that could enable an analyst to ask which employer characteristics are associated with participation in work-based learning activities. As noted above, most commentators and advocates of work-based learning see employer participation as one of the most important elements to resolve for this initiative to be brought to a national scale. This lack of information has hindered our ability to understand employers' needs and motivations. To the extent employer participation is critical to the success of the school-to-work initiative, such ignorance places the effort at a true disadvantage.

A History of the National Employer Surveys

A unique source of data is now able to shed light on these issues. The National Employer Survey (NES) was developed in 1994 by the National Center on the Educational Quality of the Workforce (EQW), a national research and development center funded by the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education. The NES was the first national, representative survey of employers to capture the interaction of employment and education issues from an establishment's perspective. Designed to address gaps in knowledge about the relationship between employers and their workforces, the instrument focused

> on establishments—asking specific questions about the organization of work and work practices, containing questions about the perceived proficiency of a workforce, and requesting information on the enterprises' investments in both formal and informal training (EQW 1994).

The 1994-96 National Employer Surveys

The initial National Employer Survey was administered in the summer of 1994 to more than 4,000 private establishments, gathering information for the first time on the practices and expectations of employers in their search for a skilled and proficient workforce. The survey was administered by the U.S. Bureau of the Census and obtained a 72 percent response rate—which is extraordinarily high for a voluntary exercise.

The survey oversampled establishments in the manufacturing sector and establishments with over 100 employees. Public sector employers, nonprofit institutions, establishments with less than 20 employees, and corporate headquarters were excluded from the sample. Computer Assisted Telephone Interviewing (CATI) was used to administer each survey, which took approximately 28 minutes to complete. Two versions of the survey were administered: one for establishments in the manufacturing sector and one for those in nonmanufacturing. The surveys were identical and differed only linguistically in places where these sectors use different terms to describe comparable aspects of their businesses.

A supplement to the 1994 NES, the NES 1996, was administered in the spring of 1996. Establishments that completed the original NES were re-surveyed. Again, the U.S. Bureau of the Census conducted the interviewing using CATI technology. In addition to creating short-term longitudinal data elements, the supplement explored areas that were not addressed by the original NES. Several items that focused on employers' participation in work-based learning projects, the extent to which they hired young workers, and their evaluations of working students were included. Seventy-five percent of the establishments that participated in the initial NES were retained in the supplement.

The 1997 National Employer Survey

Subsequent to the 1996 data collection effort, the NES fell under the aegis of the National Center for Postsecondary Improvement (NCPI) and the Consortium for Policy Research in Education (CPRE), two national research and development centers funded by OERI. In the summer of 1997, the NES 1997 was administered as a telephone survey, again by the U.S. Bureau of the Census. In addition to capturing longitudinal information on many of the employers first surveyed, the instrument was expanded to explore their participation in school-to- work partnerships and involvement in community and education initiatives.

In the 1997 administration, the Bureau contacted 6,971 private establishments with over 20 employees. The response rate—including complete and partial responses—was 78 percent. As with the original survey, the 1997 NES sampling frame included private

employers from both the manufacturing and nonmanufacturing sectors, and it over-sampled manufacturing establishments and those with more than 100 employees. Public-sector employers, nonprofit institutions, establishments with less than 20 employees, and corporate headquarters were again excluded from the sample. Over 900 establishments from the 1994 panel were re-surveyed in 1997. Establishments in California, Kentucky, Maryland, Michigan, and Pennsylvania were over-sampled in order to facilitate analyses of state-level policies. The CATI surveys conducted by the Census took approximately 45 minutes to complete. While longer than is optimum for a CATI administration, the NES 1997 still realized 78 percent response rate.

The 1998 National Employer Survey

The NES 1998 was funded by the National School-to-Work Office for the purpose of evaluating the impact of the 1994 School-to-Work Opportunities Act on private business establishments. Two strengths of the NES series are its nationally representative sample of private business establishments and its focus on qualitative data. These characteristics made the survey particularly appropriate as a vehicle for assessing the impact of the 1994 legislation on employers. Moreover, because of its partnership with the U.S. Bureau of the Census, the NES surveys enjoyed very high response rates.

The resources available for the 1998 administration allowed for a ten-minute telephone interview to 1,000 establishments. A selection process was designed to increase the chances of surveying establishments likely to hire youth, in order to better assess the impact of the legislation on establishments most likely to be targeted by the policy. A sampling probability was derived from two components. One, taken directly from the NES 1997, corresponded to the ratio of recent youth hires to the total number of employees at an establishment. The second component, computed from the Census Bureau's Current Population Survey (CPS) data, corresponded to the proportion of hours worked by youth to the total number of hours worked for an establishment's industry and size. After taking into account the original sample weight from the NES 1997, these two components were summed together into a single selection probability.

After excluding establishments that were missing critical data elements from the 1997 survey, 589 respondents that had reported participating in a formal school-to-work partnership in 1997 remained, forming the treatment group. With a goal of generating approximately 500 completed surveys for that group, the sampling probability for the treatment group was set at 1. A substantially larger number of 1997 respondents were eligible as control establishments and were sampled using the computed composite selection probability described above. The final data set consisted of responses from 439 establishments that reported participating in school-to-work partnerships in the 1997 survey, and 564 establishments reporting no such participation.

Four major questions informed the construction of the 1998 National Employer Survey, asking if participation in formal school-to-work partnerships had any effect on:

- the extent to which establishments participate in work-based learning activities;
- the degree of turnover (firing and quitting) among establishments' youth labor force;
- the costs, both direct and indirect, involved in recruiting new employees; and
- the extent to which employers provide remedial training, such as reading and math, to new employees.

The NES 1998 questionnaire (see Appendix A) explicitly queries for these outcome measures. Since the NES 1998 respondents are a subset of NES 1997 respondents, by comparing answers to questions posed in the summer of 1998 to those posed in the summer of 1997 it is possible to compute change scores that indicate whether the outcomes increased, decreased, or remained constant over the year. Both the direct queries and revealed changes can be used to assess the impact of the 1994 School-to-Work Opportunities Act on this sample of employers.

A More Complete Picture: Findings from the National Employer Surveys

Both the 1997 and 1998 administrations of the NES answer key questions about the scale, scope, and significance of work-based learning programs among American employers—supplementing research about schools and students to help complete the school-to-work story. Together, these surveys gauge the kinds and numbers of school-to-work activities in which employers engaged, their participation patterns over time, the actual provision of work-based learning slots for students, and the impact of partnerships on employers in terms of the provision of remedial education, recruitment costs, and youth turnover rates. In all, these findings indicate clear directions for promoting employer participation and growing the school-to-work initiative to scale.

The NES 1997: A Substantial Employer Infrastructure

The NES 1997 was the first employer survey to ask explicitly about an establishment's participation in a formal school-to-work partnership. Respondents answered the following question:

> School-to-work partnerships consist of joint activity between schools and employers to build connections between school-based learning and work-based learning. Is your establishment participating in such a school-to-work partnership?

In addition, respondents were asked about their participation in various types of work-based-learning activities. The specific question from the NES 1997 reads:

> Is your establishment participating in any of the following work-based learning activities for high school or community college students? How many students were involved in each activity during the past year?

The list of activities from which respondents could choose, as well as their definitions, are included in Table 1.

Table 1. NES 1997: School-to-Work Activities and Their Definitions

Activity	Definition
Job Shadowing	Where a student follows an employee for one day or more to learn about a particular occupation or industry.
Mentoring	Where an employee is assigned to guide a student and serve as a liaison with the school on behalf of the student and the firm.
Internships	Where, for a specified period of time, students work for an employer to learn about a particular occupation or industry. This may or may not include financial compensation.
Cooperative Education	A method of instruction whereby students alternate or coordinate their academic and vocational studies with a paid or unpaid job in a related field.
Registered Apprenticeships	Formal programs registered with the U.S. Department of Labor or with an approved state apprenticeship agency. Registered apprenticeships are typically paid work experiences.
Youth Apprenticeships	Multi-year programs combining school- and work-based learning in an occupation area. These are designed to lead directly into a related postsecondary program, entry-level job, or registered apprenticeship program. These apprentices may or may not be paid.

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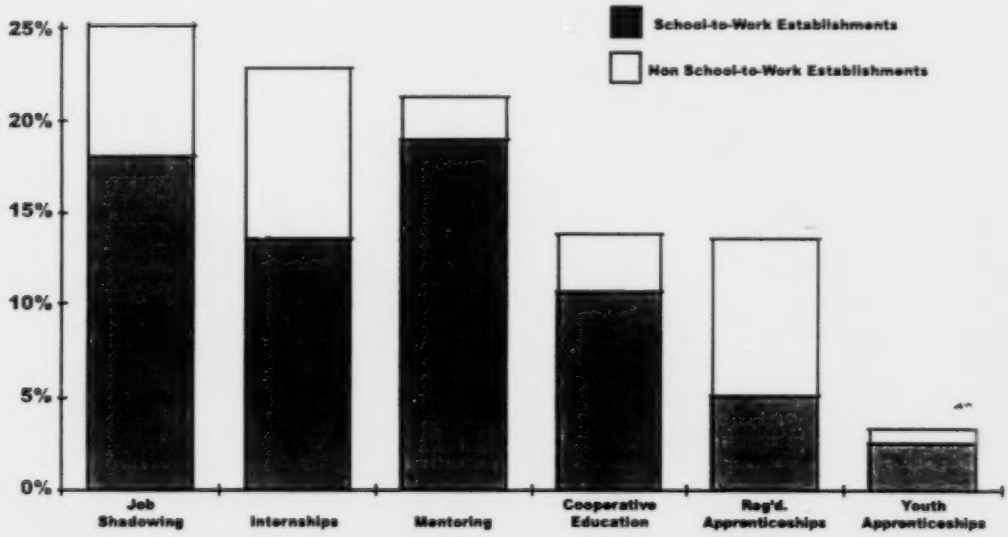
Answers to these questions on employer participation were reported in "Bringing School-to-Work to Scale: What Employers Report" (NCPI 1997), which stated that a substantial proportion of employers (26 percent) said they were participating in a formal school-to-work partnership, as defined by the National School-to-Work Office. An even larger proportion (40 percent) reported participating in some form of work-based learning activity. As indicated in this 1997 report, membership in a school-to-work partnership does much to encourage the provision of work-based learning slots; however, such membership is not necessary for an employer to support work-based learning. Many employers engage in work-based learning activities without an explicit affiliation with a school-to-work partnership, and a small proportion of employers affiliated with school-to-work partnerships do not provide work-based learning opportunities. Participating in a school-to-work partnership and the provision of work-based learning opportunities are by no means synonymous.

While the absolute proportion of private employers engaged in these activities appears to be sizable, I would subscribe to Silverberg's more cautious position that such participation has not been as substantive as work-based learning proponents would desire. Figure 1 shows that, with the exception of internships, the least intensive types of work-based learning activities (job shadowing and mentoring) accounted for most of the work-based learning slots in 1997. Indeed, among establishments that reported participating in formal school-to-work partnerships, these low-intensity work-based learning activities accounted for the majority of slots. In common parlance, even internships—which presumably entail more substantive work than a job shadowing or mentoring experience—are not necessarily linked to a student's career goals or academic curriculum.

Figure 1. NES 1997: Percentage Distribution of Work-Based Learning Placements



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That said, a substantial proportion of private establishments did report in 1997 that they were participating in a formal school-to-work partnership or participating in some work-based learning activity. Given the breadth of school-to- work placements in the nation's business establishments, the 1997 data certainly provide a reason to be optimistic about the possibility of bringing the initiative to scale.

In particular, the data reveal that the national school-to-work initiative had surpassed its own benchmarks for gauging success. As part of the original mandate of the School-to-Work Opportunities legislation, 30 percent of all businesses participating in school-to-work systems were expected to offer work-based learning slots by the fall of 1997. According to the results of the NES 1997, the National School-to-Work Office has achieved this benchmark, more than three-fold: 91 percent of school-to-work businesses are offering these slots, broadly defined. Unsettling, however, was the finding in these data—and elsewhere—that work-based learning experiences were more superficial than substantive.

NES 1998: Persistence, Dropouts, and Expansion

The re-administration of the NES in 1998 provided an opportunity to indicate just how institutionalized the initiative had become. In 1998, NES respondents were asked the same questions from 1997 regarding participation in a school-to-work partnership and in work-based learning activities. Table 2 shows the national estimates generated from these two questions.

Table 2. NES 1998: School-to-Work Participation Patterns, 1997 to 1998

	1998 School-to-Work	Percent Not School-to-Work	Percent of Total
1997 School-to-Work	83,224	36,979	25%
1997 Not School-to-Work	94,725	264,986	75%
Percent of Total	37%	63%	

The good news is that the percentage of the sample that reported participating in a formal school-to-work partnership increased from 25 percent in 1997 to 37 percent in 1998. Indeed, more than half of the establishments that reported participating in school-to-work partnerships in 1998 were not on board in 1997. Clearly, this a welcomed finding for proponents of the school-to-work initiative—participation seems to be spreading. However, the less encouraging news is that the data reveal a high degree of volatility in establishments' engagement in school-to-work partnerships. Over 30 percent of the establishments that reported participating in a school-to-work partnership in 1997 did not report doing so in 1998. So while these figures indicate a substantial amount of growth in school-to-work affiliation among employers, they also show the tenuous nature of employers' attachment to the intervention.

What do the data tell us about the employers who remained in school-to-work partnerships, compared to those who either never participated or dropped out? Establishment size was a key characteristic associated with the propensity to remain a school-to-work partner between 1997 and 1998, or to join such a partnership (Table 3). The largest establishments, more than others, tended to remain participants in formal partnerships. Of those establishments employing 1,000 or more workers who reported participating in a school-to-work partnership in 1997, 89 percent reported they were still engaged in 1998. The comparable retention rate for the entire sample was just 69 percent. Similarly, 64 percent of establishments employing 1,000 or more people that did not participate in school-to-work partnerships in 1997 had joined one by the summer of 1998. In comparison, only 26 percent of all establishments that were not participating in a school-to-work partnership in 1997 reported doing so in 1998.

Table 3. NES 1998: Percentage of Employers in School-to-Work Partnerships by Participation Status and Size

Establishment Size	Retained in School-to-Work*	Joined School-to-Work**
20 – 49	68%	22%
50 - 99	60%	35%
100 - 249	78%	32%
250 - 1,000	71%	29%
1,000 or More	89%	64%
Entire Sample	**69%**	**26%**

*Proportion of establishments reporting 1997 school-to-work partnership affiliation

**Proportion of establishments reporting no 1997 school-to-work partnership affiliation

Table 4. NES 1998: Percentage of Employers in School-to-Work Partnerships by Participation Status and Industry

Establishment Sector	Retained in School-to-Work*	Joined School-to-Work**
Manufacturing	64%	27%
Nonmanufacturing	70%	26%
Entire Sample	**69%**	**26%**

*Proportion of establishments reporting 1997 school-to-work partnership affiliation

**Proportion of establishments reporting no 1997 school-to-work partnership affiliation

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An establishment's economic sector was not as predictive as its size on school-to-work persistence or recruitment. Nonmanufacturing establishments were only slightly more likely than manufacturing establishments to remain in school-to-work partnerships—70 percent, compared with 64 percent, respectively. The likelihood that an establishment would decide to undertake school-to-work activities during the year was virtually identical across these broad economic sectors: 27 percent of the manufacturing establishments that were not participating in 1997 reported doing so in 1998, while 26 percent of similar nonmanufacturing establishments reported joining a year later.

School-to-Work Partnerships and Work-Based Learning

While the provision of work-based learning opportunities need not be limited to those employers who report formally participating in a school-to-work partnership, previous work (NCPI 1997) indicates that participating establishments are more likely to provide such opportunities for students. Given the high degree of flux surrounding employer participation, what is the impact upon the provision of work-based learning slots? Are establishments that reported participating in a partnership in both 1997 and 1998 the most likely to provide work-based learning slots? Are establishments that have dropped out of a partnership likely from withdraw from work-based learning—or do they remain active in that activity? Is there any residual impact on the majority of employers who did not participate in a partnership in either year?

Tables 5 through 9, drawn from the 1997 and 1998 National Employer Surveys, shed some light on these questions.

Table 5. NES 1997 and 1998: Percentage of Establishments Engaging in Job Shadowing, by Partnership Status

School-to-Work Status	1998 Percent	1997 Percent	Change
Persist in School-to-Work	53%	29%	24%
Depart from School-to-Work	13%	60%	-47%
Join School-to-Work	53%	34%	19%
No School-to-Work	8%	4%	4%
Total	**25%**	**19%**	**6%**

Table 6. NES 1997 and 1998: Percentage of Establishments Engaging in Mentoring, by Partnership Status

School-to-Work Status	1998 Percent	1997 Percent	Change
Persist in School-to-Work	31%	18%	13%
Depart from School-to-Work	4%	52%	-48%
Join School-to-Work	14%	3%	11%
No School-to-Work	6%	5%	1%
Total	**12%**	**8%**	**4%**

Table 7. NES 1997 and 1998: Percentage of Establishments Engaging in Internships, by Partnership Status

School-to-Work Status	1998 Percent	1997 Percent	Change
Persist in School-to-Work	39%	43%	-4%
Depart from School-to-Work	16%	75%	-59%
Join School-to-Work	31%	44%	-13%
No School-to-Work	12%	7%	5%
Total	**21%**	**26%**	**-5%**

Table 8. NES 1997 and 1998: Percentage of Establishments Engaging in Cooperative Education, by Partnership Status

School-to-Work Status	1998 Percent	1997 Percent	Change
Persist in School-to-Work	74%	48%	26%
Depart from School-to-Work	6%	56%	-50%
Join School-to-Work	26%	29%	-3%
No School-to-Work	6%	4%	2%
Total	**22%**	**21%**	**1%**

Table 9. NES 1997 and 1998: Percentage of Establishments Engaging in Registered Apprenticeships, by Partnership Status

School-to-Work Status	1998 Percent	1997 Percent	Change
Persist in School-to-Work	13%	10%	3%
Depart from School-to-Work	10%	14%	-4%
Join School-to-Work	8%	36%	-28%
No School-to-Work	10%	7%	3%
Total	**10%**	**14%**	**-4%**

By and large, dropping out of a formal school-to-work partnership was associated with an employer's withdrawal from work-based learning activities. With the exception of employers offering registered apprenticeships, establishments that ended school-to-work partnerships were the most likely to withdraw their work-based learning opportunities. While these establishments account for just an estimated 8 percent of establishments in the sampling frame, the change scores are quite dramatic. For employers who disengaged, decreases of approximately 50 percentage points are seen in the provision of work-based learning opportunities for job shadowing, mentoring, internships, and cooperative education.

Other the other hand, establishments whose participation persisted show the most substantial increase in the provision of work-based learning slots. These establishments reported double-digit percentage point increases in the proportion of employers providing job shadowing, mentoring, and cooperative education opportunities.

Two findings are particularly striking. The first issue was introduced earlier: the 20 percent of establishments that reported joining a school-to-work partnership between 1997 and 1998 also reported a huge decrease in the provision of registered apprenticeship opportunities. In fact, the 1997 figure (36 percent) measuring the percentage of establishments providing these work-based- learning slots seems rather high, and the 1998 figure is more in line with the rest of the sample. Still, this relationship warrants further investigation. Employer substitution of school-to-work participation for registered apprenticeship opportunities would clearly be an undesirable program outcome. Unfortunately, NES 1998 data are not equipped to elucidate this association. This question might be more appropriately addressed using case study or focus group techniques.

The second notable finding involves establishments that did not participate in a formal school-to-work partnership in either 1997 or 1998. These employers are the only group of establishments with a greater participation rate in every category of work-based learning activity. The 1998 rates are not overwhelming: they range from a low of 6 percent for mentoring and cooperative education to a high of 12 percent for internships. Still, they may represent evidence of a "spill-over" effect from formal school-to-work partnerships that encourages general participation and support of work-based learning activities.

The Impact of Partnerships on Participating Employers

What impact do school-to-work partnerships have on participating establishments? Recall our earlier discussion of the different motivations employers might have for sponsoring work-based learning activities. It is clear that participating in work-based learning generally—and school-to-work partnerships specifically—must address an enterprise's individual or collective needs in order for the 1994 initiative to have the impact its proponents desire. Is there any evidence that the school-to-work initiative has been helpful in addressing these types of needs? Using NES 1998 data, it is possible to investigate the relationship between an employer's participation in school-to-work partnerships and the provision of remedial education to new hires, the changes in an establishment's recruitment costs, and the turnover rates of its young workers.

Remedial Education

Does participating in a school-to-work partnership obviate the need for an establishment to provide remedial education to its young workers? Table 10 shows the proportion of establishments providing remedial training in literacy and arithmetic to their frontline workers and technical staff, as measured by NES 1997. These rates should be considered as baseline data.

For this baseline observation, establishments that persisted in school-to-work partnerships were much more likely to provide remedial training to both frontline workers and technical staff: 23 percent and 9 percent, respectively. Those employers that initiated school-to-work partnerships in 1998 were more likely to provide frontline workers with remedial training than the establishments that either subsequently dropped out or never participated in the first place. There was no difference in the propensity of these establishments to provide remediation for their technical staffs.

Table 11 displays the proportion of establishments not providing remedial training in 1997 that initiated such training in 1998, as measured by the NES 1998.

Table 10. NES 1997: Percentage of Establishments Providing Remedial Training to Frontline Workers and Technical Staff in 1997, by Participation Status

School-to-Work Status	Frontline Workers	Technical Staff
Persist in School-to-Work	23%	9%
Depart from School-to-Work	9%	4%
Join School-to-Work	13%	4%
No School-to-Work	7%	4%
Total	**11%**	5%

Table 11. NES 1998: Percentage of Establishments Initiating Remedial Training for Frontline Workers and Technical Staff in 1998, by Participation Status

School-to-Work Status	Frontline Workers	Technical Staff
School-to-Work Status	**Frontline Workers**	**Technical Staff**
Persist in School-to-Work	14%	17%
Depart from School-to-Work	3%	5%
Join School-to-Work	4%	6%
No School-to-Work	4%	10%
Total	**6%**	**10%**

The results are surprising in two ways. First, establishments that never participated in school-to-work partnerships were twice as likely as those that either departed from or joined such partnerships to start providing remediation for their technical staff. This finding could indicate an instance where school-to-work participation acts as a substitute for the provision of remedial training for technical workers.

Second, establishments that persist in their participation are much more likely to add remedial training programs for both frontline workers and technical staff one year later. On reflection, this result is not really counter-intuitive. While in existence for several years, the national school-to-work initiative is still relatively new—making it unreasonable to expect substantial improvement in the educational quality of youths being hired by the establishments in our survey. As a pedagogic intervention, in particular, it is still in the early stages, limiting its ability to decrease the need for remedial training at this point in time.

However, it is reasonable to assume that employers who are involved in the initiative's partnerships would be among the most motivated enterprises taking action to directly address the basic skills needs of their labor forces. This assumption is consistent with the notion that an education/training nexus exists, which is discussed in earlier work (Zemsky et al. 1995; Shapiro and Zemsky 1996). The NES 1997 data presented in Table 10 indicate that the employers most committed to addressing the basic skills needs of their workers are also those most likely to engage in a local school-to-work partnership on a long-term basis. (Recall that these are baseline numbers and should be interpreted more as attributes of the participating—or nonparticipating—establishments, rather than as effects of the school-to-work initiative.) However, using NES 1998 data, Table 11 demonstrates the other side of the causal relationship, reflecting changes in establishment behavior, not baseline attributes. Those employers who engage in a local school-to-work partnership on a long-term basis are the most likely to recognize the wisdom of addressing the basic skill needs of their workers.

In short, the remediation-participation dynamic may unfold in the following way. School-to-work partnerships may be attractive to employers that are committed to dealing with the basic skills needs of their workforces. Presumably, through work within a partnership, these employers demonstrate to their peers in the partnership the payoff of such a commitment, and the practice of providing remediation spreads. Clearly, however, more qualitative research methods must be pursued to establish that the process reflects what is described here.

Recruitment Costs

What can NES data tells us about the association between participation in school-to-work partnerships and the costs establishments incur when recruiting new employees? Does participation have any impact at all on such costs? If so, what is the nature of that impact?

Both the NES 1997 and NES 1998 asked employers to report the percentage of their establishments' labor costs spent on the recruitment of new employees. To analyze the impact of participating in school-to-work partnerships on such costs, I calculated the percent change in this figure from 1997 to 1998 and then regressed that change-score on the establishments' school-to- work status, controlling for economic sector (manufacturing or nonmanufacturing) and establishment size (number of employees). The model was able to explain 13 percent of the variance in the change-score. It is useful to note that the results presented here are virtually identical to those observed after adding controls for the skill level of the establishments' workforces—for example, level of schooling and percentage of technicians.

The effect of economic sector was insignificant, and only weak size effects were apparent. The results by school-to-work status are presented in Table 12 below. Note that the differences displayed are in comparison to what the change would have been, had the establishment never participated in a school-to-work partnership *all else held equal*.

Table 12. Multiple Regression Predicting the Change in the Percentage of Labor Costs Spent Recruiting New Employees, by Participation Status

School-to-Work Status	Percent Change Difference	Probability Level
Persist in School-to-Work	0.25%	NS*
Depart from School-to-Work	0.38%	NS*
Join School-to-Work	2.09%	0.0001

Note: Compared with similar establishment that reported no participation in a school-to-work partnership.
* NS = No significance

While each type of establishment in the regression seems to have increased the resources spent on recruiting new employees relative to those that never participated in a partnership, the differences for the persisters and departers are not significant. Given the NES 1998 data and our model specification, it does not appear that the recruitment costs for these types of establishments changed any more than they would have for similar, nonparticipating establishments.

The story is different for establishments reporting that they joined a school-to-work partnership between 1997 and 1998. These employers increased their recruitment costs significantly, in comparison to employers who never participated at all. Indeed, these employers increased their recruitment costs as a percentage of total labor costs significantly faster than any other type of employer.

It is necessary to point out that the difference detected is not large—only a 2 percent greater rate of change than one would otherwise expect to see. Still, it is very unlikely that this difference occurred by chance. It makes sense that those businesses motivated to initiate participation would also allocate additional resources to employee recruitment. They represent employers that are starting to take the educational quality of their workforce to heart and beginning to apply monetary and other resources to address that concern.

Youth Turnover Rates

Previous work (Shapiro and Iannozzi 1998) documents an association between employers' participation with local schools and a decreased turnover rate among their young employees. While that work did not examine school-to-work participation per se, it is reasonable to investigate whether an establishment's participation in—and commitment to—a local partnership is reflected in the extent to which its youth labor force either quits or is fired.

The aspect of turnover over which an employer has control is involuntary turnover—the firing rate. To examine the impact of school-to-work participation on the firing of young workers, I computed the change in termination rates between establishments' responses to the NES 1997 and NES 1998 and regressed that result on school-to-work status. The model controlled for economic sector, establishment size, establishment turnover rate, and local labor market conditions (local education level and 1997 unemployment rate). The analysis accounted for 10 percent of the variation in the change in termination rates. Table 13 below displays the results for school-to-work persisters, departers, and recruits, in comparison to employers that never participated, everything else held equal.

The analysis indicates that establishments that persist in their participation—along with those that once participated but later dropped out—were likely to have decreased rates at which their young workers were terminated, compared to establishments that never participated. On the other hand, employers that recently joined partnerships were actually more likely to have increased their youth termination rate. Perhaps this finding is reflective of the increased importance these employers began attaching to the roles of their young workers.

The other aspect of turnover is voluntary turnover, or the quit rate. To examine the impact of school-to-work participation on the percentage of young workers quitting, I computed the change in these rates between establishments' NES 1997 and NES 1998 responses. Again, the change-score was regressed on school-to-work status. As before, the model controlled for economic sector, establishment size, establishment turnover rate, and local labor market conditions (local education level and 1997 unemployment rate). This time, the analysis only accounted for 5 percent of the variation in the change in quit rates. Table 14 lists the results of the regression for school-to-work persisters, departers, and recruits, compared to nonparticipating employers.

Table 13. Multiple Regression Predicting the Change in the Percentage of Youth Fired, by Participation Status

School-to-Work Status	Percent Change Difference	Probability Level
Persist in School-to-Work	-1.19%	0.05
Depart from School-to-Work	-1.10%	0.07
Join School-to-Work	0.89%	0.04

Note: Compared with similar establishment that reported no participation in a school-to-work partnership.

Table 14. Multiple Regression Predicting the Change in the Percentage of Youth Who Quit, by Participation Status

School-to-Work Status	Percent Change Difference	Probability Level
Persist in School-to-Work	-1.80%	0.08
Depart from School-to-Work	-0.98%	NS*
Join School-to-Work	-0.10%	NS*

Note: Compared with similar establishment that reported no participation in a school-to-work partnership.

* NS = No significance

Employers that recently left—and those that had recently joined—school-to- work partnerships did not experience changes in their youth quit rates that were significantly different from those who never participated. On the other hand, employers whose participation persisted through 1997 and 1998 experienced significantly decreased quit rates compared to nonparticipants.

The results of these analyses of youth termination and quit rates resonates with earlier work (Shapiro and Iannozzi 1998). Employer participation in school partnerships has a positive impact on the ability of those businesses to retain their young labor forces. What the NES 1997 and NES 1998 data indicate is that the impact on turnover seems to first occur in the area the employer can directly control—termination rates. These data also indicate a subsequent benefit of sustained participation: a decrease in the level of voluntary quits by young workers.

Conclusion

An analysis of data from the 1997 and 1998 administrations of the National Employer Survey allowed us to examine the one-year impact that engagement in a school-to-work partnership had on participating employers. Perhaps one of the most striking findings was the high degree of volatility in employers' participation: over 30 percent of establishments participating in a school-to-work partnership in 1997 had disengaged by the summer of 1998. Clearly, efforts to bring school-to-work to scale require progress in reducing this high level of attrition. On the other hand, a much higher proportion of establishments reported participating in school-to-work partnerships in 1998 than in 1997—37 percent compared with 25 percent, respectively.

Employers that consistently participated were most likely to increase their provision of work-based learning opportunities. This result is not surprising, since work-based learning is a major goal of the 1994 School-to-Work Opportunities Act, which inspired the partnerships. There was some evidence of a "spill-over" effect: even nonpartnership employers seem to be increasing the provision of work-based learning, admittedly on a smaller scale than employers that formally participate in school-to-work partnerships.

The anticipated impact on employers of participating in school-to-work partnerships assumed that real benefits would accrue to the business establishment. Specifically, advocates hoped that employers would experience decreases in the need to provide remedial education to frontline workers, in recruitment costs for new employees, and in the turnover rates of young workers.

Contrary to these anticipated outcomes, an analysis of NES data found that employers with the highest levels of participation were the most likely to increase the extent to

which they provide their workers with remedial training. They were not likely to decrease the percent of their labor costs spent on recruiting new employees. Those employers joining a partnership were likely to increase their recruitment costs. Given the brief period of time that has elapsed since the passage of the Act, it is most likely premature to expect reductions in the need for remediation and investment in employee recruitment. These systemic conditions do not lend themselves to rapid changes.

A reasonable speculation is that school-to-work partnerships are attractive to employers that are concerned with the skill levels of their youth labor forces. This supposition would account for the fact that participating employers are more likely to provide remedial opportunities to their workers, as well as allocate greater resources toward employee recruitment. Moreover, the experiences of these establishments are likely to help to raise the consciousness of other employers in the partnership about youth skill levels. Such a dynamic might help to explain why participating establishments were most likely to increase their remediation efforts.

The analysis also uncovered evidence that employer affiliation with a school-to-work partnership is associated with decreased firing rates for young employees as well as decreased quit rates. Unlike the systemic conditions mentioned above, firing and quit rates are more representative of local conditions on the shop-floor. These shop-level changes are the most likely places that a positive impact of school-to-work partnership participation would first be seen.

Of three examined outcome variables, one (youth turnover rates) represents a savings to participating institutions. The other two (remediation and recruitment) actually imply increased costs for participants. Indeed, it is possible that the increased costs associated with partnership participation are at least partially responsible for the high attrition rate that NES data reveal. However, increases in productivity could outweigh the additional costs of participation—representing a net savings to the establishment. It is conceivable that a more highly skilled and productive labor force will ultimately result from increased efforts in basic skill training and recruitment. Unfortunately, the NES data do not allow such an analysis at this time.

What can be said is that participation in school-to-work partnerships grew between the summers of 1997 and 1998. Moreover, the provision of work-based learning slots did expand—substantially, among employers participating in a partnership, but even marginally among nonparticipants. Whether or not employers can be motivated to persist in these practices over the long term is not clear. While participation has a positive impact on youth turnover rates, it does seem to go hand-in-hand with increased efforts at recruitment and basic skill remediation. Whether the short-term productivity effects—or medium-term systemic effects—are sufficient to recoup those costs is still an open question.

ENDNOTE

1. Data were obtained from U.S. Census Bureau electronic income history files, accessed on December 11, 1998, at: http://www.census.gov/hhes/income/histinc/p25.html and http://www.census.gov/hhes/income/histinc/p26b.html .

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Appendix A: The National Employer Survey School-to-Work Follow-up Supplement Questionnaire

OMB No. 0607-0787: Approval Expires 12/31/98

FORM **NES-1**
(7-20-98)

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
SUPPORTED BY THE NATIONAL CENTER FOR
POST-SECONDARY IMPROVEMENT (NCPI)

THE NATIONAL EMPLOYER SURVEY SCHOOL-TO-WORK FOLLOW-UP SUPPLEMENT QUESTIONNAIRE

Interviewer – Make changes to establishment name, address, and telephone number if different from preprinted information.

Name of company 1	Name of company 2
Number and street	
City, State, and Zip Code	
Respondent's name	Telephone number

INTRODUCTION

Hello, have I reached the (*Insert establishment name*) located at (*Insert establishment address*)? May I speak to (*Insert contact name*).

This is (*Insert your name)* from the U.S. Bureau of the Census. Last year your establishment participated in a telephone study we conducted for the Department of Education. We would like to ask you a few questions about how things may have changed over the past year. This study will take about 10 minutes of your time. It has been approved by the Office of Management and Budget, approval number 0607-0787.

Your participation is voluntary. All information you provide is confidential under the provisions of Title 13 of the U.S. Code. My supervisor may monitor my performance on this interview. The questions I ask pertain to the establishment located at (*See pre-printed address)* only.

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FILLING POSITIONS AT YOUR ESTABLISHMENT

1a. About how many weeks does it take to fill a typical front-line job opening?

READ IF NECESSARY: "Front-line" refers to an employee performing a primary function – rather than a support function – of the establishment. For example, a production worker in a factory, or a salesman in a sales concern.

001 _____ Weeks

b. How does this compare to one year ago?

Does it take –

002
1 ☐ More time,
2 ☐ Less time, or
3 ☐ About the same amount of time as it did one year ago?

INTERVIEWING CANDIDATES

2a. About how many candidates do you interview for each front-line job opening now?

003 _____ Candidates

b. Would you say that is –

004
1 ☐ More,
2 ☐ Less, or
3 ☐ About the same in comparison to one year ago?

c. Does your establishment provide professional development opportunities – such as **internships** or **externships** – for school **teachers**?

*READ IF NECESSARY: A teacher **internship/externship** is when a teacher works at a particular job at the firm for at least two weeks to learn specific skills, or rotates throughout the firm to learn all aspects of the industry. The teacher may or may not be paid for this time.*

005
1 ☐ Yes
2 ☐ No

SCHOOL-TO-WORK PROGRAMS

The next set of questions ask about PROGRAMS that might bring high school, college, or trade school students into your workplace and if your establishment participates in work-based learning activities for high school or community college students.

3. School-to-work partnerships consist of joint activity between schools and employers to build connections between school-based learning and work-based learning. Is your establishment participating in such a school-to-work partnership?

006
1 ☐ Yes
2 ☐ No

CONTINUE ON PAGE 3

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4a. Does your establishment participate in **job shadowing**?

READ IF NECESSARY: Job shadowing is where a student follows an employee for one day or more to learn about a particular occupation or industry.

007 1 ☐ Yes → 2 ☐ No – *Go to b*

(1) About how many students were involved in **job shadowing** at your establishment during the past year?

008 _____ Students

(2) On average about how many hours a week do students spend doing **job shadowing**?

009 _____ Hours

b. Does your establishment participate in **mentoring**?

READ IF NECESSARY: Mentoring is where an employee is assigned to guide a student and serve as a liaison with the school on behalf of the student and the firm.

010 1 ☐ Yes → 2 ☐ No – *Go to c*

(1) About how many students were involved in **mentoring** at your establishment during the past year?

011 _____ Students

(2) On average about how many hours a week do **mentors** spend with their students?

012 _____ Hours

c. Does your establishment participate in **internships**?

READ IF NECESSARY: Internships are where for a specified period of time students work for an employer to learn about a particular occupation or industry. This may or may not include financial compensation.

013 1 ☐ Yes → 2 ☐ No – *Go to d*

(1) About how many students were involved in **internships** at your establishment during the past year?

014 _____ Students

(2) On average about how many hours per week do students spend doing **internships**?

015 _____ Hours per week

CONTINUE ON PAGE 4

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4d. Does your establishment participate in **cooperative education**?

READ IF NECESSARY: Cooperative education is a method of instruction whereby students alternate or coordinate their academic and vocational studies with a paid or unpaid job in a related field.

016 1 ☐ Yes → 2 ☐ No – *Go to e*

(1) About how many students were involved in **cooperative education** at your establishment during the past year?

017 _____ Students

(2) On average about how many hours per week do students spend in **cooperative education** activities at this establishment?

018 _____ Hours per week

e. Does your establishment participate in **registered apprenticeships**?

READ IF NECESSARY: Registered apprenticeships are formal programs registered with the U.S. Department of Labor or with an approved state apprenticeship agency. Registered apprenticeships are typically paid work experiences.

019 1 ☐ Yes → 2 ☐ No – *Go to f*

(1) About how many students were involved in **registered apprenticeships** at your establishment during the past year?

020 _____ Students

(2) On average about how many hours per week do students spend at your establishment in their **registered apprenticeship**?

021 _____ Hours per week

f. Does your establishment participate in **youth apprenticeships**?

READ IF NECESSARY: Youth apprenticeships are multi-year programs combining school- and work-based learning in an occupation area. These are designed to lead directly into a related post-secondary program, entry-level job, or registered apprenticeship program. Youth apprentices may or may not be paid.

022 1 ☐ Yes → 2 ☐ No – *Go to 5*

(1) About how many students participated in **youth apprenticeships** at your establishment during the past year?

023 _____ Students

(2) On average about how many hours per week do students spend at your establishment in their **youth apprenticeship**?

024 _____ Hours per week

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RECENT HIRING

The following questions refer to front-line employees who are 18–25 years-old.

5. About how many 18–25 year old employees did you hire for this establishment during the past year? Please be sure to include people hired in the past year who no longer work for you.

025 _____ Employees

6a. About what percent or how many of those 18–25 year old employees were involuntarily terminated within a year of being hired?

028 _____ % OR 027 _____ Terminated

b. Is that more, less, or the same in comparison to a year earlier?

028 1 ☐ More
2 ☐ Less
3 ☐ Same

7a. About what percent or how many of those 18–25 year old employees quit?

029 _____ % OR 030 _____ Quit

b. Is that more, less, or the same in comparison to a year earlier?

031 1 ☐ More
2 ☐ Less
3 ☐ Same

8a. Of front-line employees who are 18–25 years old that you hired in the past year, about what percent would you estimate had prior experience in a cooperative education, internship, or apprenticeship program either at your establishment or elsewhere?

032 _____ %

b. About what percent or how many of them were involuntarily terminated?

033 _____ % OR 034 _____

c. About what percent or how many quit?

035 _____ % OR 036 _____

9. Of the 18 to 25 year-olds hired during the past year, about what percent of, or how many needed remedial training in reading or math?

037 _____ % OR 038 _____ Employees in remedial training

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10. Does your establishment provide remedial training for literacy and arithmetic skills for the following types of employees:

a. Front-line employees?

039 1 ☐ Yes
2 ☐ No

b. Office/Clerical/Sales/Customer service staff?

040 1 ☐ Yes
2 ☐ No

c. Technical/Technical Support staff?

041 1 ☐ Yes
2 ☐ No

RECRUITING COSTS

The next question concerns the cost of recruiting new employees.

11. On average, about what percent of your establishment's total labor costs is spent annually on the recruitment and selection of your employees?

042 _____ % Labor cost

WORKPLACE POLICIES AND DOWNSIZING

The last three questions ask about policies that you might have introduced into your workforce.

12a. Do you currently have any leased employees on your premises? That is, employees of temporary help agencies or similar agencies.

043 1 ☐ Yes – *Go to b*
2 ☐ No – *Skip to 13a*

b. How many leased employees are now working at this establishment?

044 _____ Leased employees

c. Could you please give me a description of some of the jobs the leased employees perform?

READ IF NECESSARY: The types of jobs might include payroll, administration, sales, production, etc.

045 _____

_____

_____

_____

_____

_____

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13a. In the past five years, that is since July 1993, have you had a downsizing or layoff of employees?

048 1 ☐ Yes – *Go to 13b*
2 ☐ No – *Skip to 14a*

b. In what years did this happen? *Mark (X) all that apply.*

	(1) Did this happen in –		**(2)** How many employees were displaced?
047	1993?	☐ Yes →	_____
048	1994?	☐ Yes →	_____
049	1995?	☐ Yes →	_____
050	1996?	☐ Yes →	_____
051	1997?	☐ Yes →	_____

14a. In the past five years, that is since July 1993, have you out-sourced or subcontracted any functions that were previously performed inside the organization?

052 1 ☐ Yes – *Go to 14b*
2 ☐ No – *Skip to 15*

b. In what year(s) did you outsource or use a subcontractor? *Mark (X) all that apply.*

	(1) Did this happen in –		**(2)** How many employees were outsourced or contracted?
053	1993?	☐ Yes →	_____
054	1994?	☐ Yes →	_____
055	1995?	☐ Yes →	_____
056	1996?	☐ Yes →	_____
057	1997?	☐ Yes →	_____

c. Could you please give me a description of some of the jobs these outsourced or contracted employees perform?

READ IF NECESSARY: The types of jobs might include payroll, administration, sales, production, etc.

058 _____

_____

_____

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15. Would you be interested in receiving a summary report of the results of this survey?

059 1 ☐ Yes ——→ To whom should we send the report?
2 ☐ No

060 Name _____

061 Number and street _____

062 City _____ State _____ ZIP Code _____

063 Email _____

064 Fax number ( ) _____

THANK YOU FOR YOUR COOPERATION

Notes